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ABSTRACT

A study was conducted to compare the locus of control of developmental studies, graduate, and undergraduate students enrolled in a four-year institution in the University System of Georgia. The study utilized Rotter's Internal-External locus of control scale which differentiates individuals on the basis of the person's perceptions that outcomes in life are due primarily to forces within her/his control (internal) or to factors beyond her/his control such as luck or fate (external). The 29-item test (with 23 relevant items) was administered to 88 developmental studies students, 69 undergraduates, and 62 graduate students. Using two- and three-factor analyses of variance, study findings revealed: (1) there were significant correlations between student type, employment status, and age level of students with scores on the locus of control index, but no significant differences on the basis of race or sex; (2) students who worked full-time, those over 25, and graduate students had significantly more internal locus of control; and (3) the most significant difference in locus of control occurred on the basis of age between those age 18-25 and those 26 and older and on the basis of student type between graduate students and developmental and undergraduate students. The report includes a discussion of the implications of the study. (HB)

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LOCUS OF CONTROL:

A COMPARISON OF DEVELOPMENTAL STUDIES, UNDERGRADUATE, AND GRADUATE STUDENTS

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Abstract

As academic achievement of diverse student populations has become a primary concern among higher education institutions with open or less selective admission policies, these schools are attempting to tailor instruction to meet the needs of all students. Therefore, the purpose of this study was to compare locus of control of developmental studies, undergraduate, and graduate students using additional variables of age, gender, employment status, and race as secondary independent variables. Significant factors of type of student ($p < .001$), age ($p < .001$), and employment status ($p < .05$) were found, and using age as a covariate, the factor type of student continued to yield significant differences at the .001 level. Recommendations are presented which include the use of formal training programs that resemble the personal causation training done by DeCharms (1972) for developmental studies students to change these student's self-perceptions.

Locus of Control:
A Comparison of Developmental Studies, Undergraduate, and Graduate Students

By the 1960's researchers began to recognize factors in addition to intelligence that are significant when predicting academic achievement. Among these variables is the concept of locus of control (Lefcourt, 1976). Although there have been numerous studies which focus on locus of control and its effect on academic achievement, the definitive research has been primarily conducted with students in grades one through twelve (Baron and Ganz, 1972; Coleman, 1968; Conger and Constanzo, 1976; Fitzpatrick, 1974; McGhee and Crandall, 1968; Norwicki and Roundtree, 1971; Norwicki and Walker, 1973). In recent years, a few researchers have investigated the locus of control construct with respect to the achievement of college students (Eiseman and Platt, 1968; Hjelle, 1970; Lombardo and Fantasia, 1978; Roueche and Mink, 1976; Weaver, 1976); however, the results of these studies have not been conclusive as to the effects of the locus of control construct on achievement at the college level (Wright and Ducette, 1976).

With the current emphasis on educational opportunity for all, American colleges and universities are opening their doors to a more academically diverse student population. Therefore, the

quality of academic achievement has become a primary concern in higher education, and among colleges with open or less selective admissions policies, trends to tailor academic counseling and instruction for non-traditional student populations are evolving. It would follow logically that these methods of academic counseling, program development and instruction could be directed more effectively toward the needs of the students if the effects on achievement of variables such as the locus of control construct could be adequately evaluated at the college level.

Hence, the purpose of this study was to compare the locus of control of developmental studies, undergraduate, and graduate students enrolled in a four year senior institution in the University System of Georgia.

Method

Subjects

Subjects included 219 students enrolled during Spring Quarter 1984 who were classified as follows: developmental studies - 88 students; undergraduates - 69 students; and, graduates - 62 students. Students were selected by cluster sampling techniques, and all were enrolled in courses offered by the School of Education, which includes the Department of Developmental Studies. Seventy-two of the subjects were black; 136, white; and, six of

other races. The sample also included the following: 64 students employed full-time; 74, part-time; 76, unemployed; 157, females; 52, males; 151, age 18-25 years; 44, age 26-35 years; 18, age 36-45 years; and 6, age 46 years or older.

Instrument

Locus of Control was measured using Rotter's Internal-External Locus of Control Scale administered during regular class time. The instrument, developed by Julian Rotter and first published in 1954, includes 29 forced choice items with six items serving as fillers. Scores range from zero (highly internal) to 23 (highly external) and result when each external item responded to by the subject from a pair of statements is awarded a point.

The items deal exclusively with the subjects' beliefs about the nature of the world and are concerned about how reinforcement is controlled (Rotter, 1966). The developer considered the test a measure of generalized expectancy which may correlate with the value the subject places on internal control. None of the items is directly addressed to the preference for internal or external control. As presented by Rotter, the locus of control construct deals with a person's perception that outcomes in life are due primarily to forces within his control (internal) or to factors beyond his control such as luck or fate (external).

Among the numerous studies reporting reliability information for the I-E scale, MacDonald (1973) reported a Kuder-Richardson reliability of .70 from a sample of 400 students enrolled in college psychology classes. test-retest reliability coefficients from a 60-student sample had a value of .72 after one month, and correlations with Marlowe-Crowne Social Desirability Scale range from -.07 to -.35 (Rotter, 1966).

Results

Using two-factor and three-factor analyses of variance, significant differences were found between types of students (i.e., graduate, undergraduate, developmental studies); employment statuses of students (i.e., full-time, part-time, unemployed); and, age levels of students (i.e., 18-25 years, 26-35 years, 36-45 years, 46 years and older). Significant differences were not found between races (i.e., black, white, other) and genders, and interactions were not present in any of the analyses. Additionally, using age as a covariant, the comparison types of students yielded a significant result ($p < .001$). Graduate students, older students, and full-time employed students had significantly lower scores indicating a greater degree of internal locus of control.

As shown in Tables 1 - 4, students who work full-time

($p < .05$), are over age 25 ($p < .001$), and are graduate students ($p < .001$) have significantly more internal locus of control. Also, as shown in Tables 3 and 4, age is a highly significant covariate ($p < .001$), and equalizing the effects of age, type of student ($p < .01$) and employment status ($p < .05$) continue as significant main effects with those students employed full-time and having graduate status being significantly greater in internal locus of control.

Insert Tables 1, 2, 3, and 4 about here

Discussion

Implications of these results include the following. Since developmental studies students and younger students (viz., freshman students) feel that they have little control over their destinies and perceive no relationship between their actions and outcomes, they will be less likely to persist in achievement striving especially if failure results; therefore, colleges and universities may choose through freshmen orientation courses and developmental studies programs to provide additional counseling services and training to assist these students in developing more initiative, actions, and responsibility related to the controlling

forces in their lives.

Developmental studies students who exhibited less internal control than undergraduate or graduate students may avoid achievement activities and fail to reach their potential. The belief that their previous academic failures are due to their low ability could inhibit their motivation to try harder in the future. At the same time the belief that success is due to external factors does not encourage one to make efforts to succeed and to believe in one's ability. Earlier research by Coleman et al. (1966) suggesting that the cognitive systems pertinent to achievement motivation may be learned differentially by various racial and social class groupings was not supported. Other research by Freeze, Fisher, McHugh, and Valle (cited in Bar-Tal, 1978) finding that attributional patterns of women differed from men was not supported. If, in fact, graduate students with a greater degree of internal locus of control have a higher degree of achievement motivation, previous research by Weiner and Kukla (1972) related to achievement motivation has been supported.

There is a possibility of maximizing achievement behavior by providing students with instruction and feedback that would encourage them to make internal attributions for success and lack of effort attributions for failure. Changes in perceptions of

reasons for success and failure should improve academic performance of developmental studies students. Studies by Dweck (1975) and Chapin and Dyck (1976) showed that children who initially attributed failure to lack of ability and did not persist in their efforts, and who were given attribution training (attribute success and failure to effort) developed more reading persistence than children who did not receive the training. Since evidence seems to confirm that the changes in causal perceptions has an impact on academic performance developmental studies and undergraduate students might profit from attributional training.

The purpose of training programs or modifications of teacher practices should be to establish realistic perceptions of self-ability and to emphasize the importance of effort in achieving outcomes. It seems that such a goal can be best achieved in individualized programs in which students are given tasks that match their abilities, and, therefore, success is attributed to ability and effort, and failure is attributed to lack of effort (Bar-Tal, 1978).

The use of individualized programs provides a suitable opportunity to design instructions that can be incorporated into teaching practices by which teachers can deal with students who tend to disregard the importance of effort as a cause of success

and failure, tend to ascribe success to external causes, and tend to attribute failure to lack of ability. When tasks are provided that are suitable to a person's own abilities, a student experiences successful outcomes to such tasks, and through such experiences confidence in his or her own ability is raised (Bar-Tal, 1978).

Formal training programs for Developmental Studies students that resemble the personal causation training done by DeCharms (1972) should be implemented by training teachers to change these student's self-perception, which will contribute to academic improvement of participating students. The emphasis must be on ability and effort as the causes for success and lack of effort as the cause of failure to maximize the academic performance of students.

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Table 1

Mean I/E Scale Scores

Employment status	N	$\bar{X}$
Full time	64	7.30*
Part time	74	10.11
Unemployed	76	9.92
Gender	**N**	**$\bar{X}$**
Females	157	9.08
Males	62	9.27
Age	**N**	**$\bar{X}$**
18 - 25	151	10.23
26 - 35	44	6.98*
36 - 45	18	6.22*
46 or older	6	6.00*
Race	**N**	**$\bar{X}$**
Black	72	10.47
White	136	8.51
Other	6	9.50
Type of student	**N**	**$\bar{X}$**
Developmental studies	88	9.97
Undergraduate	69	10.14

(table continues)

Type of student	N	$\bar{X}$
Graduate	62	6.82*
	Total N	Total Mean
	219	9.13

Note. *Significant more internal locus of control.

Table 2

ANOVA for Type of Student by Race (3 x 3); Type of Student by Gender (3 x 2); Type of Student by Employment Status (3 x 3); and Race by Age (3 x 4)

Source of variation	df	MS	F	Significance
Type of student	2	167.17	10.52	$p < .001$
Race	2	30.78	1.94	
Type of student	2	230.49	14.25	$p < .001$
Gender	1	0.06	0.004	
Type of student	2	134.21	8.97	$p < .001$
Employment status	2	53.12	3.55	$p < .05$
Race	2	28.15	1.82	
Age	3	154.86	10.01	$p < .001$

Table 3

ANCOVA (3 x 3 x 3) for Type of Student by Employment Status by Race with Age as Covariate

Source of variation	DF	MS	F	Significance
Covariate				
Age	1	177.29	11.93	p∠.001
Main effects				
Type of student	2	73.38	4.94	p∠.01
Employment status	2	45.71	3.08	p∠.05
Race	2	17.95	1.21	
Explained	7	91.57		
Residual	206	14.86		
Total	213	17.38		

Table 4

ANCOVA (3 x 2 x 3) for Type of Student by Gender by Race with Age as Covariate

Source of variation	DF	MS	F	Significance
Covariate				
Age	1	80.20	5.04	p∠.05
Main effects				
Type of student	2	150.37	9.45	p∠.001
Gender	1	2.46	0.15	
Race	2	32.18	2.02	
Explained	6	89.20	5.61	
Residual	212	15.92		
Total	218	17.93		

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